# Pipe Ramming

## **Second Edition**

Prepared by the Pipe Ramming Task Force of the Trenchless Installation of Pipelines (TIPS) Committee of the American Society of Civil Engineers





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# MANUALS AND REPORTS ON ENGINEERING PRACTICE

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## PREFACE

Manual of Practice No. 115, Second Edition, was prepared by the Pipe Ramming Task Force of the ASCE Committee on Trenchless Installation of Pipelines (TIPS) as part of the Utility Engineering & Surveying Institute (UESI). The manual describes current pipe ramming practices used by engineers and construction professionals in designing and constructing pipelines under roads, railroads, streets, and other constructed and natural structures and obstacles.

This manual has been created by a group of engineers, owners, suppliers, manufacturers, and contractors fully knowledgeable of the method and its use. This manual considers many of the advances that have occurred over the years with pipe ramming. Many of the sections provide a summary of the state of the industry as of 2019. The task force acknowledges that the technology continues to change and that changes in construction continue to develop.

Sections have been written assuming the reader may be new to the various construction methods included in this manual. No document including this one can encompass all the issues on a particular pipe ramming project. Improvements in best practices and technology continue to evolve so quickly that consideration of this manual on any project must take into account not only the specific characteristics of the particular project but also further improvements in best practices and technology.

The engineer of a pipeline is encouraged to consider all trenchless methods before concluding that pipe ramming is the most suitable construction method available. Manuals and Reports on Engineering Practice (known as MOPs) have been written by ASCE for different construction methods. A list of useful references specific to the various trenchless methods is provided at the end of Chapter 1.

If the engineer responsible for the pipeline project does not have a strong background in trenchless design, an engineering firm that specializes in trenchless designs should be consulted to provide a peer review early in the planning/design process to ensure good design choices are being made.